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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,568	12/04/2003	Paul R. Coronado	IL-11286	8931
7590	09/21/2006		EXAMINER	
Ann M. Lee Assistant Laboratory Counsel Lawrence Livermore National Laboratory P.O. Box 808, L-703 Livermore, CA 94551			JOHNSON, EDWARD M	
			ART UNIT	PAPER NUMBER
			1754	
DATE MAILED: 09/21/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/728,568	CORONADO ET AL.	
	Examiner	Art Unit	
	Edward M. Johnson	1754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 03 August 2006.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-8 and 10-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-8 and 10-14 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) Notice of Informal Patent Application
- 6) Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Demizu et al. US 5,547,794.

Regarding claims 1 and 7, Demizu '794 discloses a granulated composition comprising hydrophobic aerogel (see column 9, lines 28-31) and active carbon (see column 4, lines 37-41).

Demizu fails to disclose functionalizing with an arsenic-removing constituent.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to functionalize the composition of Demizu with a metal-removing constituent because Demizu discloses incorporation of phosphoric acid (see column 7, lines 7-9), Applicant's preferred arsenic-removing constituent,

into the composition to preferably act as dispersion stabilizer auxiliary agent (see column 7, lines 3-4).

Regarding claims 2-3 and 5, Demizu '794 discloses granulated composition comprising hydrophobic aerogel (see column 9, lines 28-31) and active carbon (see column 4, lines 37-41).

Regarding claim 4, Demizu '794 discloses iron and manganese (see column 4, lines 40-57).

Regarding claim 6, Demizu '794 discloses incorporation of phosphoric acid (see column 7, lines 7-9)

Regarding claim 14, Demizu discloses 0.8 parts per 100 (see column 9, lines 28-31).

3. Claims 1-3, 8, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tavlarides et al. US 5,817,239.

Regarding claim 1, Tavlarides '239 discloses a sorbent material for removing heavy metal ions (see abstract and Fig. 2) comprising hydrophobic functionalized silica gel (see column 5, lines 32-37 and 54-58)

Tavlarides fails to disclose the gel functionalized with an arsenic-removing constituent.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to functionalize the gel of Tavlarides with a arsenic-removing constituent because

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Tavlarides discloses the composition for removal of heavy metals (see column 8, lines 53-58), which would motivate one of ordinary skill to functionalize the disclosed gel with an arsenic metal removing constituent, as disclosed.

Regarding claim 8, Tavlarides '239 discloses a sorbent material for removing heavy metal ions (see abstract and Fig. 2) comprising hydrophobic functionalized silica gel (see column 5, lines 32-37 and 54-58).

Tavlarides fails to disclose analyzing after contacting for the presence of arsenic.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to analyze the sorbent of Tavlarides after contacting for the presence of arsenic because Tavlarides discloses the composition for removal of heavy metals (see column 8, lines 53-58), which would motivate one of ordinary skill to perform such contact and check for the efficiency thereof for the removal of arsenic, as disclosed.

Regarding claim 2, Tavlarides '239 discloses beads (see column 5, lines 36-37), which would at least motivate granules in an ordinary artisan.

Regarding claims 3 and 10, Tavlarides '239 discloses silica gel, which would motivate an ordinary artisan to use either aerogel or xerogel.

4. Claims 4-7 and 11-14 are are rejected under 35 U.S.C. 103(a) as being unpatentable over Tavlarides '239, as applied above, and further in view of Moskovitz et al. US 5,948,726.

Regarding claims 1 and 7, Tavlarides '239 discloses a sorbent material for removing heavy metal ions (see abstract and Fig. 2) comprising hydrophobic functionalized silica gel (see column 5, lines 32-37 and 54-58).

Tavlarides fails to disclose activated carbon.

Moskovitz '726 discloses activated carbon (see column 6, line 37).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the active carbon of Moskovitz in the sorbent of Tavlarides because Moskovitz discloses the active carbon for use in making an adsorbent (title) preferably to cross-link the binder with itself and to facilitate further processing, extruding, or filter pressing (see column 6, lines 38-44).

Regarding claims 4-6 and 11-14 Moskovitz '726 discloses manganese, iron (see column 8, lines 10, 25, and 32-33), activated carbon (see column 6, line 37), and addition of phosphoric acid (see column 9, lines 4-22).

Response to Arguments

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5. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

It is argued that regarding base claims 1 and 7... as mandated under §MPEP 2142 and *In re Royka*. This is not persuasive because it would have been obvious to one of ordinary skill in the art at the time the invention was made to functionalize the composition of Demizu with a metal-removing constituent because Demizu discloses incorporation of phosphoric acid (see column 7, lines 7-9), Applicant's preferred arsenic-removing constituent, into the composition to preferably act as dispersion stabilizer auxiliary agent (see column 7, lines 3-4).

It is argued that the Examienr states with respect to claims 1 and 7 that Demizu... to support his argument. This is not persuasive because Applicant appears to admit that active carbon is disclosed, arguing only that Demizu's intended "purpose" of "adding color" is different. However, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

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It is argued that regarding base claims 1 and 8... and *In re Royka*. This is not persuasive because Tavlarides discloses a sorbent material for removing heavy metal ions (see abstract and Fig. 2) and a hydrophobic functionalized silica gel (see column 5, lines 32-37 and 54-58), and it would have been obvious to one of ordinary skill in the art at the time the invention was made to functionalize the gel of Tavlarides with a arsenic-removing constituent because Tavlarides discloses the composition for removal of heavy metals (see column 8, lines 53-58), which would motivate one of ordinary skill to functionalize the disclosed gel with an arsenic removing constituent, as disclosed.

It is argued that Applicants have amended independent claims 1 and 7 as shown and as discussed above. This is not persuasive because Tavlarides discloses a sorbent material for removing heavy metal ions (see abstract and Fig. 2) comprising hydrophobic functionalized silica gel (see column 5, lines 32-37 and 54-58), which would obviously, to one of ordinary skill, at least suggest an arsenic removing constituent.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this

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action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward M. Johnson whose telephone number is 571-272-1352. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley S. Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Edward M. Johnson
Primary Examiner
Art Unit 1754

EMJ